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Social and Geographical Conditions Influencing Tourist and Recreational Migrations of Inhabitants of the Poznań Metropolis¹

Abstract. The main objective of this paper was to determine social and geographical conditions influencing tourist and recreational trips of inhabitants of the Poznań Metropolis. Authors assumed that the Poznań Metropolis is a tourist region consisting of three areas: internal, external and peripheral. The areas have been well adjusted to recreational activities and connected to green wedges of the unique wedge-ring greenery system of the city of Poznań. More detailed thesis presuppose that this three areas are also characterised by a defined structure and specific character of tourist and recreational migrations. Hypotheses were tested using direct survey method with an interview questionnaire. Empirical material qualified to the analysis included 1446 questionnaires of interviews with inhabitants undertaking tourist and recreational activity within the Poznań Metropolis. The results of the survey research indicated that one-day recreation predominates in the urban area, while 2-4-day recreation is more frequent in the suburban area. Financial conditions and diversified elements and features of tourist space proved to be important factors provoking tourist and recreational activity.

Keywords: Poznań Metropolis, tourist and recreational activity, conditions provoking tourist migrations

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1. Introduction

In the modern world urban areas play an increasingly important role. Global social and economic changes result in concentration of resources on small areas connected with each other by a network of mutual relations. Here is where the people, industry, administration as well as services related to education, science, culture, health, recreation, and tourism are concentrated. The issue of metropolitan areas has been raised in many, scientific and planning, elaborations [e.g. Solowiej 1992; Iwicki 2002; Markowski & Marszał 2006; Szmytkie 2013; Budner 2015; Jałowiecki 2016]. Current literature on the subject presents many definitions of a metropolis, metropolitan area, or agglomeration. In addition, these three terms are often used as synonyms. This fact considerably hinders identification of the metropolis and analysis of the phenomenon of metropolitanization. The term 'metropolis' usually describes a major urban centre meeting some defined functional requirements related to its size (min. 0.5-1.0 million inhabitants), significant economic potential, developed sector of higher services, high innovation potential, exercising metropolitan functions as well as being a transport node and a stimulator of the network economy and management model, etc. [Markowski & Marszał 2006]. Bogdan Jałowiecki defines a metropolis as a city of 0.5 million or more inhabitants located in a unique and specific area which exercises different functions, has well-established network of services, institutions and facilities, and shows high technological, political and cultural potential [Jałowiecki 2016: 2]. Union of Polish Metropolises adds that a metropolis should also be a place of study for over 50 thousand students and European (supranational) transport node. It is also noticeable that nowadays metropolises are urban-country regions and not mega-communes.² In January 2016, a new act on metropolitan relations came into force where the metropolitan area was defined as a "spatially consistent area of influence of a city being a seat of a voivode [...], characterised by the existence of strong functional connections and advanced processes of urbanization, inhabited with at least 500 thousand inhabitants."³

Numerous difficulties are also related to identification and determination of centres exercising metropolitan functions. Establishment of the Poznań Metropolis was one of the aims of the Updated Development Strategy for the City of Poznań to 2030⁴ which plans enhancement of cohesion through spatial and

² www.metropolie.pl [access: 28.11.2016].

³ Ustawa o związkach metropolitalnych z dnia 9 października 2015 r., Dz.U. nr 0, poz. 1890 [Act on metropolitan relations, Journal of Laws no. 0, item 1890], article 4, chapter 2.

⁴ Uchwała Nr LX/929/VI/2013 Rady Miasta Poznania z dnia 10 grudnia 2013 r. w sprawie Strategii Rozwoju Miasta Poznania do roku 2030 [Poznań City Council Resolution of 10 December 2013].

functional integration of the capital of the Wielkopolska Region with the adjacent communes through, among others, recreation, tourism, and surveys of metropolitan awareness and identity [Kaczmarek & Mikuła 2015]. The Poznań Metropolis is one of the metropolises of national significance [Markowski & Marszał 2006] or one of the weakly developed European metropolises (4th order).⁵ The metropolitan area includes 22 territorial units arranged in two circles surrounding centrally located Poznań. It includes 11% of the Wielkopolskie Voivodeship area inhabited with 30% of the inhabitants of the Wielkopolska Region [Kaczmarek & Mikuła 2015].

The Poznań Metropolis is located within several physico-geographical units (Poznań Lakeland, Września Plain, Gniezno Lakeland, Poznań Gorge of the Warta River [Kondracki 2008] what results in diversified terrain configuration. A characteristic element of the landscape is radial arrangement of river valleys: Warta with its main tributaries: Welna, Cybina, Bogdanka, Sama, and Samica, and lakes located in the subglacial channel, especially those located in the Wielkopolski National Park and lakes of Kórnik and Bnin (the so-called blue infrastructure). Natural attractiveness is also increased by forest ecosystems of the Wielkopolski National Park, nature reserves, NATURA 2000 areas, protection forests, and landscape parks: Puszcza Zielonka, Promno, Rogaliński [Mizgajski & Zwierzchowska 2015]. The so-called green infrastructure and high-class cultural values create unique landscape based on which tourist and recreational areas and complexes were determined. This system assumes predominant role of the centrally located Warta River valley in development of tourism and recreation [Bródka & Miedzińska 2015].

The area of the Poznań Metropolis included in the research is not spatially and functionally uniform, it also is not homogeneous concerning forms of administration and settlement. In order to render spatial dependencies the studied area was divided into three areas (Fig. 1): internal – urban (comprising of Poznań along with directly adjacent 9 communes), external – suburban (9 communes), and peripheral (3 communes).⁶

⁵ The European Spatial Planning Observation Network (ESPON) programme lead to determination of Functional Urban Areas (FUA) in Europe; Metropolitan European Growth Areas (MEGA) were distinguished among them. They were divided into four groups corresponding to individual category of the metropolitan area. Polish metropolitan areas were classified under the two lowest groups: 1) potential Metropolitan European Growth Area (3rd order) – Warsaw; 2) weak Metropolitan European Growth Areas (4th order) – Cracow, Katowice Urban Area, the Tricity (Gdańsk, Gdynia, Sopot), Wrocław, Łódź, Szczecin, Poznań [www.espon.eu, access: 28.11.2016].

⁶ The internal area (urban) consisted of the following communes: Czerwonak, Komorniki, Kórnik, Dopiewo, Luboń, Puszczykowo, Suchy Las, Swarzędz, Tarnowo Podgórne, and the city of Poznań; the external (suburban) area consisted of the following communes: Buk, Kleszczewo, Kostrzyn Wlkp., Mosina, Murowana Goślina, Pobiedziska, Rokietnica, Skoki, and Sęszew; the peripheral area consisted of the following communes: Oborniki, Szamotuły, Śrem.

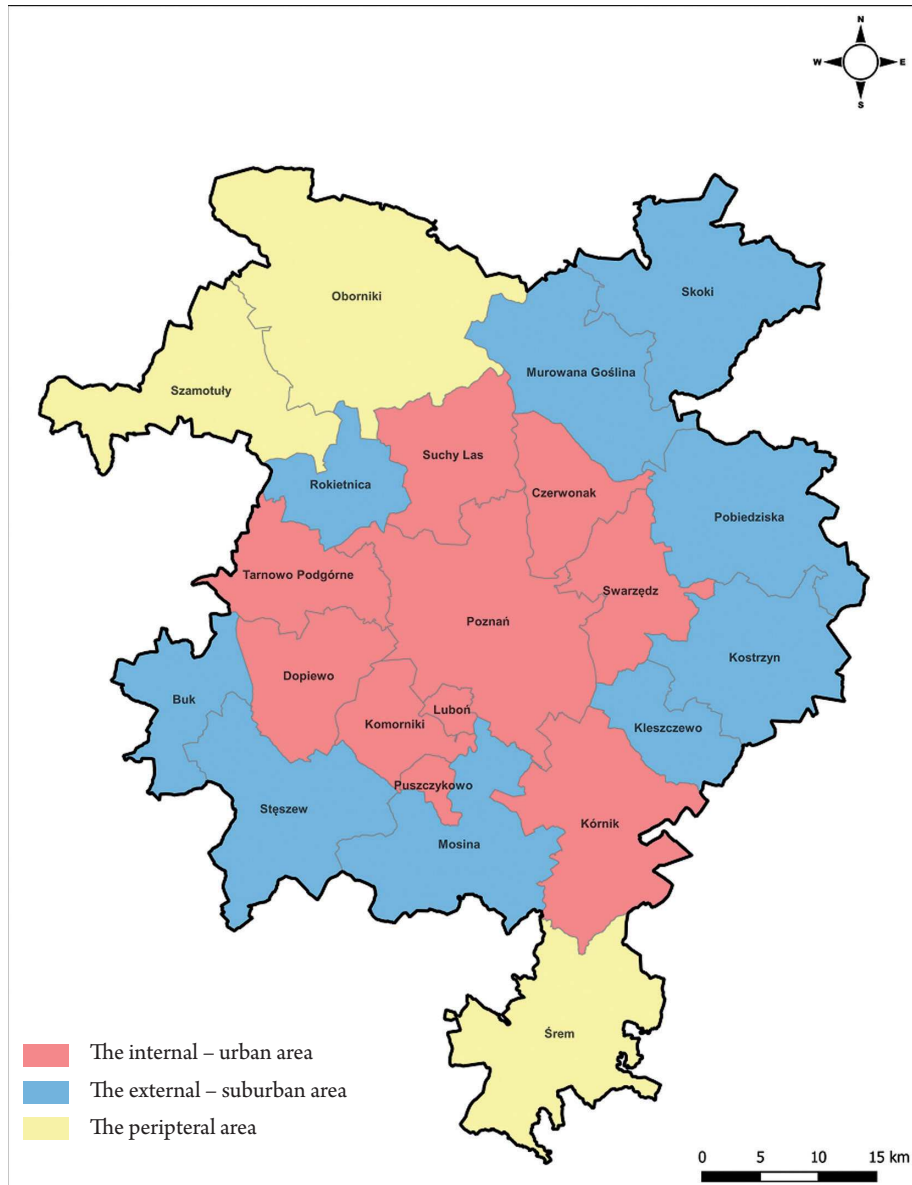


Figure 1. Tourist and recreational areas of Poznań Metropolis

Source: own research.

The main objective of this paper was to determine social and geographical conditions influencing tourist and recreational trips of the inhabitants of the Poznań Metropolis. Meeting this goal required accomplishing several theoretical

and empirical, cognitive, and application tasks. The theoretical and empirical part included determination of respondents, analysis of the structure, specific properties, and chosen factors influencing tourist and recreational migrations of the inhabitants of the Poznań Metropolis within the Metropolis. The cognitive task referred to identification of tourist and recreational areas and complexes where respondents usually spent their free time. Finally, the application task included proposition of a model approach assuming that the Poznań Metropolis is a tourist region comprising of three areas.

The following theses were assumed:

- the Poznań Metropolis has area well prepared for tourist and recreational activity arranged in two clear areas: internal (urban) and external (suburban),
- in the urban area one-day (everyday, afternoon) recreation predominates,
- in the suburban area 2-4-day recreation (weekend) predominates,
- the internal and external areas are connected by green wedges of the main river valleys thanks to the wedge–ring greenery system of the Poznań Metropolis.
- it is possible to distinguish third – peripheral area of the Poznań Metropolis showing distinct character of tourist migrations of its inhabitants,
- individual areas of the Metropolis are characterised by a defined structure and specific character of tourist and recreational migrations.

The inhabitants of the Metropolis were the object of the research while inhabitants' tourist and recreational activity was its subject. Spatial scope includes the area of all the twenty two communes comprising the Metropolis including the city of Poznań, communes of the Poznań district and the following additional communes: Śrem, Oborniki, and Szamotuły with reference to tourist and recreational areas and complexes determined during works on the Concept of Spatial Development Directions for the Poznań Metropolis [Kaczmarek 2015] that play or are predestined to play tourist and recreational role. The research was conducted in 2015-2016. The actual research was preceded by a pilot research on a randomly chosen sample of almost 60 persons. That procedure enabled validation of the research tools correctitude, explicitness and clarity of the posed questions and correctness of the obtained answers. This allowed to make relevant adjustments and to formulate the final version of the questionnaire before starting the collection of empirical data.

The method of direct survey with the technique of an interview with a questionnaire was used to evaluate the hypotheses. The questionnaire contained eleven, closed and open, questions concerning the subject matter of the research, the W sheet in which all the tourist and recreational areas of the area of the Metropolis and forms of recreation activities were stated, questions concerning socio-demographic data, and instruction concerning the aim of the survey and the way of answering individual questions. In addition, a map of tourist and recreational areas and complexes of the Poznań Metropolis was available for the respondents

during the survey. The map was supposed to make it easier for the respondents to navigate in the geographical space. The interviews were conducted in public recreational areas, squares, lawns, parks, areas near tourist trails, and in tourist and recreational areas and were anonymous. The questionnaires were completed in the presence of the person conducting the survey. Questions concerned, among others, participation in tourist and recreational activities within the Metropolis, motives of trips, expectations and needs, forms and places of recreation, and expenses for different forms of tourism and recreation.

Collected material was quantitatively and qualitatively verified (analysis of lacking data), then authors conducted data coding and processing using statistical software SPSS.⁷ Basis tools of statistical analysis were used which enabled fuller and more insightful usage of collected material.

2. Description of the sample

The material was obtained with the method of direct survey conducted from March to September 2016 among the inhabitants of 22 communes comprising the Poznań Metropolis. The survey was conducted on a sample of 1600 inhabitants. The size and selection of the sample had significant meaning for credibility of statistical surveys and possibility of making generalizations from the obtained data. When selecting the sample, two criteria were taken into consideration: number and age structure of the inhabitants of the studied administration units of the Poznań Metropolis.⁸ After verification of the collected empirical data, 1446 questionnaires completed by persons undertaking recreational and tourist activities within the Metropolis were qualified for the final analysis.

A little over half of the respondents were women (55%). The biggest group comprised persons from 30 to 39 years old (24%) and persons in their twenties and forties (20%), with secondary (37%), vocational (33%), and higher (30%) education. Three quarters of the respondents lived in the cities and towns of the Poznań Metropolis. Households consisting of 2-3 persons were the most common in the analysed group (47%). The respondents determined their current financial situation as good or average (46% and 44%, respectively). Almost half of the respondents indicated their total household monthly income as PLN 4.1-6.0 thousand (46%) and PLN 2.1-4.0 thousand (34%). A little over every third person had from 8 to 10 hours of free time per week. The following goods which

⁷ Software purchased by the WSB University in Poznań.

⁸ Determination of the size and selection of the sample was the same for the entire survey realised in the statute project of the WSB University entitled "Metropolitan area as a space of recreational penetration on the example of the Poznań Metropolis."

might influence participation in tourist and recreational trips were relatively frequently indicated as owned in the Poznań Metropolis: a car (25% of indications), bike (23%), own garden or allotment (14%), and a tent (12%). Considerably less frequently indicated were roller skates, ski, hunting, fishing equipment (3-7%), and a holiday house (3%). The majority of respondents (3/4) lived in the area of communes of the urban (internal) area of the Poznań Metropolis.

Respondents were asked to indicate the most significant motives behind their tourist and recreational activities during their free time. The need of finding a place where one can experience peace and rest (36% indications), where it is possible to engage into different forms of physical recreation (20%), where one can be close to nature and learn about culture (12%) were indicated the most frequently. Additionally, respondents indicated a desire to spend time with relatives and friends (7%), to improve health (6%), and a desire for aesthetic experiences (5%). The majority of respondents rest with their close ones and family (61%), significantly less respondents prefer to spend their free time with friends and acquaintances (32%), and only 7% of respondents prefer spending their free time alone. The main interests of the respondents are: watching television and sports coverages (46% and 36%, respectively), taking care of their health and physical fitness (30%), gardening works, travels, and visiting new places (27% each).

3. Analysis of tourist and recreational activity of the inhabitants of the Poznań Metropolis (in relation to areas of residence)

The results indicate that among inhabitants of the Poznań Metropolis short, one-day recreational activity predominated (66%) (Table 1). Regardless of the area of residence, several-hour activity was undertaken the most often, although inhabitants of the peripheral area chose this form of activity slightly less frequently (by 6 percentage points). Almost every fourth respondent took longer, 2-4-day trips. Such type of tourist and recreational activity was slightly more often undertaken by inhabitants of the external (suburban) and peripheral area of the Metropolis (by about 4-5 percentage points). Participation in even longer (5 or more days) tourist and recreational trips in the Poznań Metropolis was declared the least frequently (11%). Such long trips were relatively more often undertaken by the inhabitants of the peripheral area (by 2 percentage points). Whereas inhabitants of the external (suburban) area participated in trips of such type less often (by 3 percentage points). This can be explained by the fact that they already lived in areas well-adjusted to recreation so they did not feel the need of so long trips to other regions of the Poznań Metropolis.

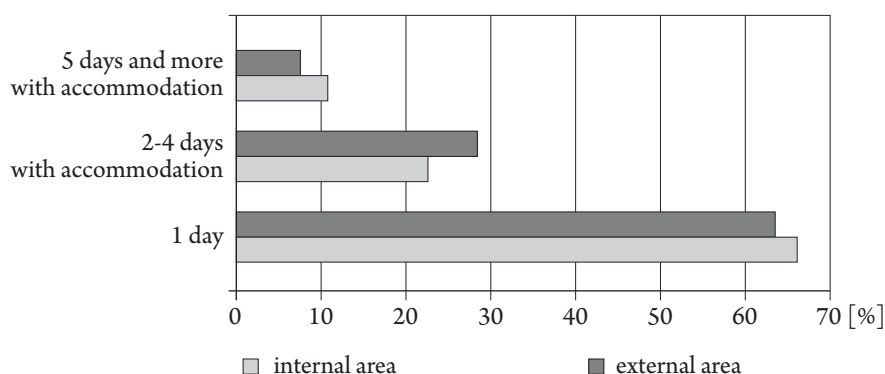
Table 1. Duration of tourist and recreational trips in the Poznań Metropolis taken in 2015 by the inhabitants in relation to the areas of their residence (in %)

Duration	Total	Internal area	External area	Peripheral area
Total	100.0	100.0	100.0	100.0
1 day	65.5	66.4	64.0	59.5
2-4 days with accommodation	24.0	22.8	28.6	28.1
5 or more days with accommodation	10.5	10.8	7.4	12.4

Source: own research ($N = 1446$).

The inhabitants of the external area took weekend trips (2-4 days) in the Poznań Metropolis more often (by 6 percentage points) while the inhabitants of the internal area more willingly chose longer recreation (5 or more days) in different areas of the Metropolis (by 5 percentage points) (Chart 1).

Chart 1. Duration of tourist and recreational trips in the Poznań Metropolis in 2015 of inhabitants of the internal and external areas (in %)



Source: own research ($N = 1446$).

Tourist and recreational activity is related to expenses and, as a result, respondents were asked to indicate estimated amount spent on trips in the Poznań Metropolis in 2015 and 2016. In 2015, the majority of them spent relatively small amount of up to PLN 300 (62%) for this purpose and planned to spend similar amounts in 2016 (59%) (Tables 2 and 3). Among the inhabitants of the internal area of the Poznań Metropolis the expenses usually ranged from PLN 101 to 300 (every third person in 2015 and 2016). This can be a result of the possibility of undertaking different forms of tourist and recreational activities relatively close to their home location. It should be recognised that in 2016 a percentage of inhabitants declaring the lowest (up to PLN 100) expenses decreased (by 3 percentage

points) and at the same time the percentage of persons planning to spend from PLN 301 to 600 and over PLN 600 on tourist and recreational activity in the area of the Poznań Metropolis increased (by 1 and 2 percentage points, respectively). In comparison to the total sample, the inhabitants of the internal area significantly less frequently declared expenses at low levels (up to PLN 100 and from 101 to 300) in 2015 as well as in 2016 (less by even up to 3 percentage points). Only this group indicated higher level of expenses (i.e., PLN 301-600 and over PLN 600) in 2015 and 2016 slightly more frequently (by 2 percentage points).

The inhabitants of the external area the most frequently spent PLN 101-300, both in 2015 and 2016 (by 1-2 percentage points more than the total sample). Also significant percentage of the external area's inhabitants indicated such expenses at a level of up to PLN 100 per year (35% in 2015 and 30% in 2016). These indications were higher from the total sample by 7% in 2015 and by 5% in 2016. It also needs to be stressed that this group showed lower tendency to spend more on tourist and recreational activities in the Poznań Metropolis in comparison to the total sample (at the level of PLN 301-600 less by 4% in 2015 and less by 2% in 2016, and at the level of over PLN 600 less by 6 and 5 percentage points, respectively).

Expenses connected to tourist and recreational trips within the Metropolis of the inhabitants of the peripheral area looked distinctly different. Here, indications of lower amounts prevailed. 80% of the respondents of this area declared up to PLN 300 in 2015, and 86% in 2016, i.e., more by 18 and 27 percentage points than the total sample, respectively. This can be related to easier access to tourist and recreational places and areas located closer to respondent's home location, what lowered the costs of the drive, among others.

Table 2. Estimated expenses for tourist and recreational trips in the area of the Poznań Metropolis bore by the inhabitants in 2015 in relation to the areas of their residence (in %)

Expenses (PLN)	Total	Internal area	External area	Peripheral area
Total	100.0	100.0	100.0	100.0
0-100	28.2	25.1	35.3	43.0
101-300	34.0	33.0	37.5	37.0
301-600	21.1	23.0	16.8	12.4
Over 600	16.6	18.9	10.3	7.4

Source: own research ($N = 1446$).

The results suggest that the external area's inhabitants spent significantly less money on tourist and recreational activities within the Poznań Metropolis. The inhabitants of the external area indicated the lowest expenses (up to PLN 100)

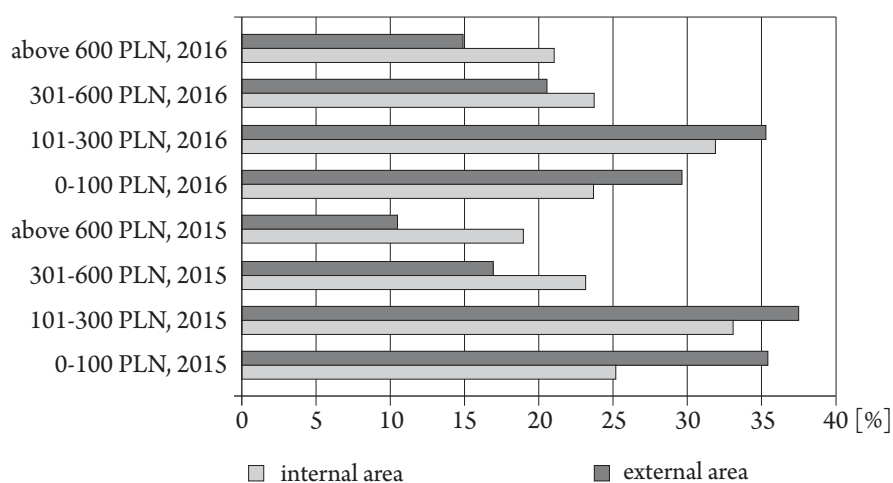
Table 3. Estimated expenses for tourist and recreational trips in the Poznań Metropolis bore by the inhabitants in 2016 in relation to the areas of their residence (in %)

Expenses (PLN)	Total	Internal area	External area	Peripheral area
Total	100.0	100.0	100.0	100.0
0-100	25.0	23.6	29.6	31.0
101-300	34.1	31.8	35.2	54.8
301-600	21.9	23.6	20.4	7.1
Above 600	19.0	21.0	14.8	7.1

Source: own research ($N = 1446$).

relatively more frequently in comparison to the internal area's inhabitants (by 10 percentage points in 2015 and by 6 percentage points in 2016). Whereas the highest expenses (over PLN 600) were more often declared by the inhabitants of the internal area in comparison to the external area's inhabitants (by 10 percentage points in 2015 and by 7 percentage points in 2016) (Chart 2).

Chart 2. Expenses for tourist and recreational trips in the area of the Poznań Metropolis in 2015 and 2016 declared by the inhabitants of the internal and external areas (in %)



Source: own research ($N = 1446$).

The most numerous group of inhabitants of the Metropolis, regardless of the area of residence, declared that on average they have one entire day of free time per week (38%) (Table 4). However, every sixth respondent declared that due to excess responsibilities their average free time is limited to somewhat less than a day per week and this significantly lowers their tourist and recreational activ-

ity in the area of the Metropolis. However, it can be noted that 44% of the inhabitants of the Metropolis declared that they have at least two days of free time per week and every fifth person indicated more than two days of free time per week. These opinions need to be taken into consideration when creating a calendar of tourist and recreational events within the area of the Metropolis because they indicate considerable potential of free time of the inhabitants of the Poznań Metropolis.

The analysis of the declarations related to free time per week divided into the areas of residence indicated some differences between the analysed areas of the Metropolis. The inhabitants of the internal – urban area relatively more frequently on average have at least two days of free time per week (more by 2 percentage points than the total sample). Whereas the inhabitants of the external – suburban and peripheral areas have so much free time significantly less often (by 7 and 9 percentage points than the total sample, respectively). Such results can be influenced by a significant number of elderly people living in the centre of the area, i.e. in Poznań, who willingly use the opportunities for outdoor recreation in parks and in readily available tourist and recreational areas. It needs to be stressed, however, that in comparison to the total sample, a higher percentage of the inhabitants of the external and peripheral areas declared that they have a relatively small amount of free time per week, i.e., on average somewhat less than a day (more by 6 and 3 percentage points than the total sample, respectively). Only the peripheral area's inhabitants declared an entire day of free time per week more frequently than the total sample (more by 4 percentage points). The presented analysis can also indicate relatively lower ability of the inhabitants of the suburban and peripheral areas of managing their free time during the week.

Table 4. Amount of free time per week declared by the inhabitants of the Poznań Metropolis, in relation to the area of their residence (hours)

Amount of free time (hours)	Total	Internal area	External area	Peripheral area
Total	100.0	100.0	100.0	100.0
0-7	17.8	16.2	24.6	22.3
8-10	38.4	37.9	38.7	42.1
11-16	23.5	24.6	17.3	23.1
Over 16	20.3	21.3	19.4	12.4

Source: own research ($N = 1446$).

The inhabitants were also asked to indicate the most preferable elements of natural environment (it was possible to indicate maximum of three elements considered the most important of the suggested five) that influenced their choice of a place for tourist and recreational activities. Generally, one (34%) or two (39%)

of respondents) of the suggested five elements were selected as important elements guiding them to choose certain location.

Lake and forest areas were the most frequently preferred elements of natural environment (63% and 55% of indications, respectively). Flowery meadows, among which the inhabitants gladly rest, influenced activity of almost every third person (Table 5). River valleys turned out to be the least attractive “lure” for the inhabitants of the (15%), despite the fact that river valleys, especially Warta River valley, are very intensively promoted as places for active recreation. Tourist and recreational infrastructure in river valleys of the Wielkopolska Region has significantly improved these days, especially on the trail of the Great Loop of Wielkopolska which was granted the Best Tourism Product prize in 2015 (Certificate of the Polish Tourist Organisation) this way becoming the main branded product of the Wielkopolska Region. It can be hoped that near future will draw inhabitants’ attention to the Warta River valley as an attractive element of natural environment of the area of the Poznań Metropolis and they consider it for tourist and recreational activity.

Table 5. Elements of natural environment preferred by the inhabitants of the Poznań Metropolis in relation to the areas of their residence (percentage of respondents)

Elements of natural environment	Total	Internal area	External area	Peripheral area
Lake	63.4	61.1	76.1	63.9
Artificial reservoir	25.3	27.0	20.2	18.0
River	14.9	16.0	13.3	8.2
Forest	54.7	54.6	58.5	50.0
Meadow	29.1	30.2	26.1	23.8

Source: own research ($N = 1446$).

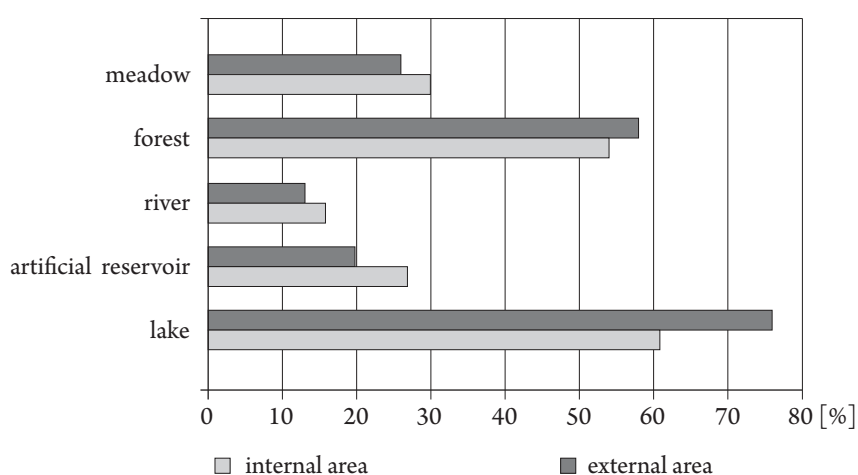
Analysis of the inhabitants’ preferences in relation to the elements of natural environment showed some, sometimes significant, differences. The inhabitants of the internal area made only slightly different choice of the preferred elements of natural environment than all of the respondents (by 2 percentage points at maximum as regards to the lake and artificial water reservoir). However, preferences of the suburban area differed, sometimes considerably, from the indications of the total sample. This group showed predilection for lakes (more by 13 percentage points) and to some extent also forests (more by 4 percentage points). Whereas artificial water reservoirs and meadows enjoyed lower interest of this group (less by 5 and 3 percentage points, respectively).

The inhabitants of the peripheral area showed significantly lower preference towards the elements of natural environment suggested in the questionnaire,

choosing a river valley and artificial reservoir significantly less frequently than the total sample (less by 7 percentage points). Similarly, in this group, meadows and forests were less popular (by 5 percentage points). The analysis of the results confirmed that the likings of the inhabitants of the analysed Metropolis area did not differ significantly from usual preferences of tourists who the most willingly rest by a lake or in a forest. The Poznań Metropolis location in the area abundant in lakes and forests fosters leisure activities in respondents residential region.

Comparing the preferences of the inhabitants of the internal and external areas of the Poznań Metropolis concerning the elements of natural environment identified that lakes were the most popular among inhabitants of the suburban area (by 15 percentage points). While the inhabitants of the urban area showed higher appreciation for the appeal of artificial reservoirs such as the Maltańskie Lake (by 7 percentage points) and meadows (by 4 percentage points) (Chart 3).

Chart 3. Elements of natural environment preferred by the inhabitants of the internal and external areas of the Poznań Metropolis (percentage of respondents)



Source: own research ($N = 1446$).

From the six suggested features of geographical environment, the inhabitants usually chose two features of an area where they would want to spend their free time (43% of respondents) (Table 6). However, the inhabitants of the external and peripheral areas more frequently indicated only one, in their opinion the most important feature (41% and 49%, respectively). The following features were usually indicated as the most important: tourist resorts (64%) and sites located outside built-up areas (54%). Areas of unique landscape values (29%) and environmentally valuable areas (28%) were chosen much less frequently and

Table 6. Features of geographical environment preferred by the inhabitants of the Poznań Metropolis in relation to the areas of their residence (percentage of respondents)

Features of geographical environment	Total	Internal area	External area	Peripheral area
Environmentally valuable areas	28.4	29.3	29.3	19.0
Diversified landscape	28.7	30.9	25.0	15.7
Sites outside built-up areas	54.4	59.3	39.9	33.9
Cultural landscape	6.6	6.8	9.0	0.8
Holiday resorts	64.1	63.3	61.7	75.2
Touristically attractive locations	14.9	14.5	17.6	14.9

Source: own research ($N = 1446$).

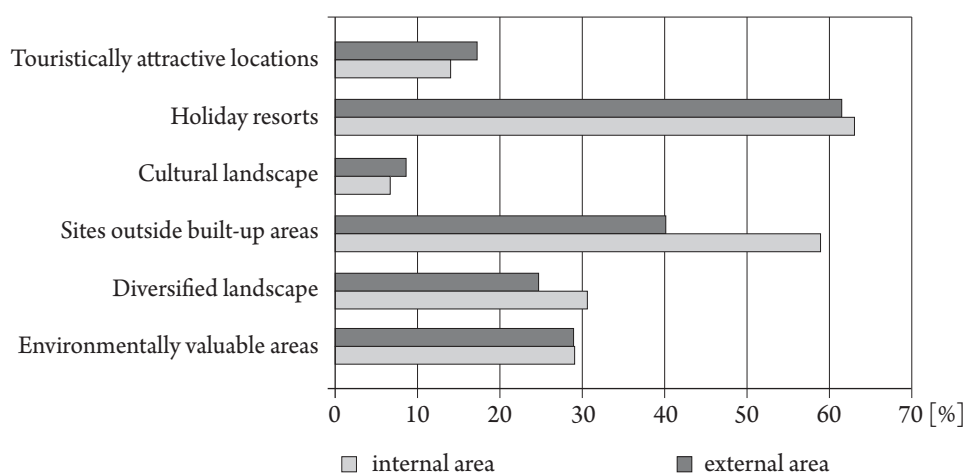
culturally interesting landscape was least important for all of the respondents (7%). Maybe it would be good to know the reasons for the fact that landscape made with a “human hand,” being a reflection and achievement of the modern civilisation was so insignificant according to the inhabitants of the Poznań Metropolis.

As in the case of the preferred elements of natural environment, inhabitants' preferences in relation to geographical environment are also differentiated depending on the area of residence. The preferences of the respondents living in the internal area of the Metropolis turned out to be very similar to the preferences of the total sample in relation to features of tourist and recreational space. Only sites located outside built-up areas were chosen more frequently in this group (by 5 percentage points). It is understandable considering the fact that the inhabitants of the city of Poznań considerably prevailed in this group of respondents. The inhabitants of the suburban area made different choices; sites located outside built-up areas turned out to be less important for them than for all of the respondents (by 14 percentage points) while touristically attractive locations and diverse cultural landscape were more important (more by 3 percentage points each). The inhabitants of the peripheral area of the Metropolis considered the presence of a leisure resort as the most important feature of geographical environment (11% more indications in comparison to the total sample). In this group of respondents sites located outside built-up areas had significantly lower impact on respondents' tourist and recreational activities than it was in other analysed groups (less by 20 percentage points in comparison to the total sample).

The preferences of the inhabitants of individual areas of the Metropolis related to the elements of natural environment and features of geographical environment reflected conditions of their home location. When choosing the space for tourist and recreational activities the respondents probably looked for changing their everyday surroundings (Tables 5 and 6).

The results indicated significant differences between the preferences of the inhabitants of the urban and suburban areas in relation to sites located outside built-up areas which was relatively more frequently indicated by the inhabitants of the urban area (by 19 percentage point), and to some extent in relation to diversified landscape (by 4 percentage points). Only environmentally valuable areas were indicated by the same number of inhabitants of both areas (Chart 4).

Chart 4. Features of geographical environment preferred by the inhabitants of the internal and external areas of the Poznań Metropolis (percentage of respondents)



Source: own research ($N = 1446$).

Moreover, to verify connection between the analysed variables, an analysis of correlation based on the Pearson's r correlation coefficient was conducted. The set of analysed variables included demographic, social, and economic characteristics of the inhabitants of the Poznań Metropolis – participants of tourist and recreational activities and their preferences concerning the geographical space (Table 7). The correlation was statistically significant at the level of 0.05 for the 78.2% of the analysed correlations between the variables presented in Table 7 (correlation was statistically significant at the level of 0.01 in as many as 72.7% of coefficients). Almost four fifths of correlation coefficients presented in Table 7 were statistically significant, thus, it can be stated that the proposed model explains the correlation between the analysed variables at a high level.

The strongest correlation occurred between the expenses bore by the analysed inhabitants of the Poznań Metropolis in 2015 and 2016 on tourist and recreational trips in the area of the Metropolis ($r = 0.79$). This indicates a stable level of expenses for that purpose. Strong relationship was also found between diversi-

Table 7. Pearson correlation coefficients of the analysed variables

	(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)
(A) – 2015 expenses	1	0.380**	0.411**	0.788**	-0.003	-0.126**	0.260**	0.242**	0.136**	0.084**	0.270**
(B) – elements of natural environment	0.380**	1	0.657**	0.406**	-0.013	-0.026	0.117**	0.003	-0.015	-0.015	0.243**
(C) – features	0.411**	0.657**	1	0.405**	-0.017	-0.065*	0.122**	0.075**	0.044	0.024	0.231**
(D) – 2016 expenses	0.788**	0.406**	0.405**	1	-0.050	-0.076*	0.203**	0.181**	0.102**	0.051	0.335**
(E) – amount of free time	-0.003	-0.013	-0.017	-0.050	1	0.234**	-0.064*	-0.091**	-0.113**	-0.142**	-0.152**
(F) – age	-0.126**	-0.026	-0.065*	-0.076*	0.234**	1	-0.392**	-0.150**	-0.076**	-0.236**	-0.221**
(G) – educational background	0.260**	0.117**	0.122**	0.203**	-0.064*	-0.392**	1	0.316**	0.319**	0.031	0.262**
(H) – monthly income	0.242**	0.003	0.075**	0.181**	-0.091**	-0.150**	0.316**	1	0.615**	0.412**	0.477**
(I) – financial situation	0.136**	-0.015	0.044	0.102**	-0.113**	-0.076**	0.319**	0.615**	1	0.119**	0.325**
(J) – number of household members	0.084**	-0.015	0.024	0.051	-0.142**	-0.236**	0.031	0.412**	0.119**	1	0.314**
(K) – owned goods	0.270**	0.243**	0.231**	0.335**	-0.152**	-0.221**	0.262**	0.477**	0.325**	0.314**	1

* significant correlation at 0.05; ** significant correlation at 0.01.

Source: own research (N = 1446).

ty of elements of natural environment and features of geographical environment preferred by the respondents (0.66). Statistically significant strong correlation was also observed between declared level of household's monthly income and self-assessed current financial situation (0.62). It is worth stressing that significant moderate correlation occurred in the case of twelve pairs of the analysed variables (22% of correlation coefficients presented in Table 7). Correlation between declared expenses on tourist and recreational trips in 2015 and diversity of elements of natural environment and features of geographical environment preferred by the respondents deserves special attention (0.38 and 0.41, respectively). Also expenses for the said trips in 2016 were correlated in a moderate degree with the diversity of elements of natural environment and features of geographical environment (0.41 in both cases), and the number of goods that can be potentially used for tourist and recreational purposes owned by the household (0.34). The said variable (owned goods) showed moderate-level significant correlation with other variables, such as: total monthly income (0.48), self-assessed current financial situation (0.33), household size expressed as the number of people in the household (0.31). Correlation between the age and educational background of the respondents proved significant at the moderate level (0.39). Moderate-level correlation between educational background and monthly income (0.32) and self-assessed financial situation (0.32) was also statistically significant.

Analysis of correlation between thirty pairs of analysed variables showed statistically significant correlation of relatively lower strength (Table 7). Only ten (per fifty five) of analysed correlations turned out to be statistically insignificant. Negative correlation between the variable describing inhabitants' age and the majority of other factors can be noticed. The only positive correlation occurs between the age and the amount of free time (0.23) which can be explained by the fact older respondents tend to have more free time. The strongest negative correlation occurred between the age and educational background what proves that the younger the inhabitants are the higher educational background they have.

The presented set of variables reasonably describes correlations between the analysed elements characterising basic groups of factors conditioning tourist and recreational activity of the inhabitants of the Poznań Metropolis, such as: demographic, social, economic, and geographical factors.

4. Analysis of spatial distribution of one-day trip and recreational activity of the inhabitants of the Poznań Metropolis

Literature presented concepts for the perfect city with green areas within the cities and in suburban areas fulfilling recreational and holiday functions [Dziewoński

1987; Sołowiej 1992]. Papers describing Poznań agglomeration refers to two kinds of tourist and recreational activities of the inhabitants (determined based on trip's duration): daily and weekend [Cofa 1983; Iwicki 2002]. Recent-years papers assume organisation of tourist functions in the Poznań Metropolis in: ten tourist and recreational areas, fourteen tourist and recreational complexes, tourist resorts, and a system of tourist trails [Bródka & Zmysłony 2017]. The Warta River valley comprises the main axis of this system connecting Puszcza Notecka, Puszcza Zielonka and Biedrusko forests with the Wielkopolski National Park. The Poznań stretch of the Warta River valley is connected to the Kierskie and Strzeszyńskie lakes by the river valley of Bogdanka and with lakes of Kórnik and Zaniemyśl by the river valley of Głuszynka.

Determination of the extent to which the inhabitants of the Poznań Metropolis use tourist and recreational areas for them designed in daily recreational activity. The questionnaire allowed respondents to indicate a place where they spend most of their free time, based on a map of tourist and recreational areas and complexes of the Poznań Metropolis [Kaczmarek 2015].

The inhabitants of the Poznań Metropolis, irrespective of the area of residence, usually spent their free time in the Warta River valley and river valleys of Główna and Cybina (34% and 31% indications in 2015; 29% and 33% in 2016, respectively) (Table 8). In 2015, the respondents significantly less frequently spent their free time in the area of the Puszcza Zielonka Landscape Park, Wielkopolski National Park, and city parks and gardens (6% each). In 2016, the inhabitants slightly more willingly (7%) spent their free time close to their home location in the city green areas. It can be considered surprising that the Wielkopolski National Park, an area of exceptional nature, landscape, and cultural values which is conveniently located and relatively easily accessible enjoyed so little interest of the inhabitants. In addition, a new project "The Active Three" was implemented in 2016. This project aimed at improved promotion of the Wielkopolski National Park area for outdoor active recreation using the system of Nordic walking, running, and cross-country skiing trails.⁹

The most popular sites for practising different forms of tourist and recreational activity were the Warta River valley (34%, 30%, 39% of indications, respectively) and river valleys of Główna and Cybina (32%, 28%, and 23%) (Table 8). These

⁹ "The active three" – trails of the three activities in the Wielkopolski National Park was created on the initiative of the following communes: Mosina, Puszczykowo, Komorniki, and Stęszew, in cooperation with the Wielkopolski National Park. Trails of different difficulty were marked out in a form of closed loops (total length of up to 55 km: loops: Mosina 7.4 km, Stęszew 12.2 km, Komorniki 10.1 km and Puszczykowo 20 km), showing off the most interesting areas concerning the nature and culture. The trails were connected with three junctions so that it could be connected in any way. Within the project also a map was made of the trails available at the web pages of all the partners [www.wielkopolskipn.pl/, access: 5.12.2016].

Table 8. One-day trip and recreational activity of the inhabitants of the Poznań Metropolis in 2015 and 2016 according to the areas of their residence (in %)

Tourist and recreational area		2015			2016				
		Total	1	2	3	Total	1	2	3
A	Warta River valley	34	34	30	39	29	29	26	36
B	Puszcza Zielonka Landscape Park	6	6	6	5	5	5	6	3
C	River valleys of the Główna and Cybina	31	32	28	23	33	34	29	32
D	River valleys of the Samica and Bogdanka	5	5	5	18	5	5	7	5
E	Lusowskie Lake	3	3	3	1	3	3	2	2
F	Niepruszewskie and Strykowski Lakes	2	2	3	0	2	2	1	0
G	Wielkopolski National Park	6	5	10	2	6	5	11	2
H	River valleys of the Głuszyńska and Koplą	4	4	3	7	4	4	6	14
I	Puszcza Notecka	1	1	0	0	1	1	1	2
J	Skoki Region	2	2	7	1	2	1	5	0
K	parks, gardens, squares of Poznań Metropolis	6	6	3	2	7	7	8	3
L	outside the Poznań Metropolis	2	2	2	2	3	3	1	3

1 – internal area, 2 – external area, 3 – peripheral area.

Source: own research ($N = 1446$).

locations were indicated the most frequently irrespectively of respondents' area of residence. The Warta recreational areas within borders of the city of Poznań, the Rogaliński Landscape Park, and Puszczykowo were the most frequently visited sites of the Warta River valley. The Warta River valley is the longitudinal axis of the Poznań Metropolis creating good conditions for developing different forms of tourist and recreational activity. The valley presents high level of natural values, is a part of Polish wildlife corridor, and creates the axis of the system of protected areas showing unique historical and cultural values. However, tourist and recreational development is very diversified. This fact was also noticed by the inhabitants of the Poznań Metropolis who chose the areas and complexes well prepared for recreation. However, the Warta River within the borders of the city of Poznań currently "starts to live". More and more investments emerge (e.g. roads, bike and hiking trails), such as places where one can rest, practise many forms of physical recreation activities as well as take advantage of cultural offer (among others, in summer concerts, meetings, workshops). The inhabitants of external area indicated the Warta River valley around Puszczykowo and Rogalin more often. These more natural areas are located closer to their homes and offer recreation in peace and quiet in beautiful landscape. The remaining areas enjoyed small (up to 7% of indications) interest of the inhabitants of external and internal areas, except for the Wielkopolski National Park (10%) which was relatively more often chosen for different forms of activity by the suburban area's inhabitants.

In addition, the inhabitants of peripheral area showed more interest in engaging in trip and recreational activities by the Samica and Bogdanka Rivers (18% of indications) where the following lakes are located: Kierskie, Strzeszyńskie, and Pamiątkowskie. These sites are prepared for recreation, have good infrastructure, and are easily accessible for the inhabitants of this area.

In 2016, the inhabitants of internal and external areas indicated the river valleys of Główna and Cybina (34% and 29%, respectively) and the Warta River Valley (29% and 26%) as locations where they the most frequently rest (Table 8). Majority of persons who chose the Główna and Cybina Rivers as the rest and recreation location usually identify this site with the surroundings of the Maltańskie Lake. These areas offer many possibilities of active recreation regardless of age thanks to different facilities there located, such as: aqua park Termy Maltańskie, the Zoo of Wielkopolska, the regatta track, alpine slide, ski slope, ice rink, ropes course, miniature golf field, bowling field, and bike and hiking trails. In addition, the closeness of Galeria Malta shopping centre enables combining outdoor recreation with shopping.

Like in previous year, the inhabitants of the peripheral area usually spent their free time in the area of the Warta River valley (36%) usually choosing the river stretch around Biedrusko and Oborniki. These areas are located close to their home locations where it is possible to rest surrounded with natural landscape in places not yet “discovered” by the inhabitants of remaining areas, thus, far from the trails packed with people. Areas of the Głuszynka and Kopla Rivers along with lakes of Kórnik and Bnin were indicated slightly more frequently (14%). Rest and recreation areas attractive considering nature (Protected Landscape Area of the basin of the Kórnik and Zaniemyśl Lakes¹⁰) and culture located in the closest proximity, especially for the inhabitants of the commune of Śrem, were chosen relatively more willingly for short, one-day trips.

In the current year, number of respondents who rested in city parks and gardens slightly increased what can be a result of care and improving condition of green areas of Poznań as well as the fact that they are kept clean and well maintained (paths, benches, gyms) (Table 8). In addition, more and more festivals and recreational events are organised in city parks, especially in summer.

5. Conclusion

Issues connected to the functioning of many metropolitan areas has become the subject of increasing academic study over the last few decades. However, still too

¹⁰ Protected is a part of the lake trough located in the commune of Kórnik (City and Commune Council Act No. 1/1/93 of 26 January 1993 on establishing the Protected Landscape Area in the commune of Kórnik, announced in the City and Commune Office on 29 January 1993; a new project of the area in development).

little reliable empirical material enabling learning the phenomenon of tourist and recreational activities of the inhabitants of the Poznań Metropolis is available.

The results allowed to indicate that inhabitants usually undertaken short, often one-afternoon or one-day trip and recreational activity within the area of the Metropolis. Weekend trips were less popular and usually included using, own, friends or family members' allotments or holiday homes.

The elements of natural environment the most often preferred by the inhabitants were lakes and forests. This indicates that the inhabitants appreciated and very willingly took advantage of the Metropolis location in the Lakeland area and of the unique water and forest system (wedge-ring system) of the city of Poznań and its surroundings. Whereas sites located outside the built-up areas or leisure resorts with well-developed infrastructure for different forms of tourism and recreation were the most important for the comfort of their leisure.

Undertaking any trip and recreational activities requires lower or higher financial expenses. The inhabitants of the Poznań Metropolis in 2015 and 2016 predominately paid small amounts of money for active participation in tourism and/or recreation. This trend can be seen in a very positive light when considering that the inhabitants showed interest in the closest surroundings and in searching for places interesting landscape-wise as well as free or cheap infrastructure, such as outdoor gyms, bike and hiking trails, Nordic walking trails, or ropes courses. This should be a guideline for the local government for creating more sites for rest and different forms of recreation in individual communes of the Metropolis.

The cognitive part of the conducted survey allowed identification of directions of tourist and recreational trips of the inhabitants within the Poznań Metropolis. Using the map of tourist and recreational areas [Kaczmarek 2015], the inhabitants indicated the Warta River valley and river valleys of Główna and Cybina as the most attractive. This indicates the need of further analysis of this areas and taking into consideration inhabitants' preferences so that, where possible, make these sites even more attractive. Other areas that enjoyed significantly less interest of the inhabitants included: Wielkopolski National Park, Puszcza Zielonka Landscape Park, Promno Landscape Park. Maybe it would be worth finding out how can this be changed?

The application approach enabled distinguish three areas: internal, external, and peripheral that comprise the Poznań Metropolis as a tourist region. Despite many similarities, especially of the urban and suburban areas, also significant differences in tourist and recreational activities of the inhabitants of individual areas could be noticed. One-day recreation was the most frequently preferred by the inhabitants of the internal and external areas. However, the inhabitants of the external area undertaken weekend recreation more willingly by and the inhabitants of the internal area preferred longer (5 days or more) recreation. The area the most often visited by the inhabitants of all the areas was the Warta River

Valley and river valleys of Główna and Cybina. While the Wielkopolski National Park was more willingly chosen by the inhabitants of the suburban area and the river valleys of Głuszynka and Kopla – by the inhabitants of the peripheral area.

Further research, discussion on tourist and recreational activities of the inhabitants, and knowledge on their needs and expectations as well as directions and places of spending free time should result in improved and more efficient exploitation of the potential of the Poznań Metropolis area. Concurring to this could be some qualitative research aiming to resolve the problem what specific kind of tourist and recreational activity form are undertaken by inhabitant of Poznan Metropolis.

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Uwarunkowania społeczno-geograficzne migracji turystyczno-rekreacyjnych mieszkańców metropolii Poznań

Streszczenie Głównym celem pracy było określenie społeczno-geograficznych uwarunkowań wyjazdów turystyczno-rekreacyjnych mieszkańców metropolii Poznań. Metropolia Poznań to region turystyczny składający się z trzech stref: wewnętrznej, zewnętrznej i peryferyjnej. Zostały one dobrze przystosowane do wypoczynku, są połączone klinami zieleni, które tworzą system pierścieniowo-klinowy. Charakteryzują się określoną strukturą i specyfiką migracji turystyczno-rekreacyjnych. W wyniku badań ustalono, że w miejskiej strefie dominuje wypoczynek jednodniowy, a w podmiejskiej wyraźnie zaznacza się wypoczynek 2-4-dniowy. Ważnym czynnikiem generującym aktywność turystyczno-rekreacyjną mieszkańców okazało się zróżnicowanie elementów i cech przestrzeni turystycznej oraz czynniki ekonomiczne. Do weryfikacji hipotez posłużono się metodą sondażu bezpośredniego z kwestionariuszem wywiadu. Materiał empiryczny, zakwalifikowany do analizy obejmował 1446 ankiet, przeprowadzonych wśród mieszkańców podejmujących aktywność turystyczno-rekreacyjną na terenie metropolii.

Słowa kluczowe: metropolia Poznań, aktywność turystyczno-rekreacyjna, czynniki generujące ruch turystyczny